a slider disposed between the first and second electrode portions having electrode portions at side faces opposed to the first and second electrode portions and movable in the predetermined direction;

an electrostatic capacitance detecting circuit configured to detect electrostatic capacitances between the one or more series of electrodes of one of the first and second electrode portions and the electrode portions of the slider; and

a driving circuit configured to drive the slider in the predetermined direction by applying voltages between selected series of electrodes of one of the first and the second electrode portions and the electrode portions of the slider, said selected series of electrodes being selected based on a detected result of the electrostatic capacitance detecting circuit,

wherein the first and second electrode portions comprise:

driving electrodes configured to drive the slider, and

electrostatic capacitance detecting electrodes configured to detect the electrostatic capacitances, and

wherein the driving electrodes are shifted by a half of an alignment pitch along the predetermined direction from the electrostatic capacitance detecting electrodes.

6. (Amended) An electrostatic actuator comprising:

first and second electrode portions arranged at predetermined intervals, each portion including one or more series of electrodes arranged successively in a predetermined direction;

a slider disposed between the first and second electrode portions having electrode portions at side faces opposed to the first and second electrode portions and movable in the predetermined direction;

an electrostatic capacitance detecting circuit configured to detect electrostatic capacitances between the one or more series of electrodes of one of the first and second electrode portions and the electrode portions of the slider; and

a driving circuit configured to drive the slider in the predetermined direction by applying voltages between selected series of electrodes of one of the first and the second electrode portions and the electrode portions of the slider, said selected series of electrodes being selected based on a detected result of the electrostatic capacitance detecting circuit,

wherein the electrode portions of the slider are provided along the predetermined direction and comprises:

driving electrode portions configured to drive the slider, and

electrostatic capacitance detecting electrode portions configured to drive the electrostatic capacitances, and

wherein the driving electrode portions are shifted by a half of an alignment pitch along the predetermined direction from the electrostatic capacitance detecting electrode portions.

8. (Amended) The electrostatic actuator according to Claim 6, wherein the first and second electrode portions are provided with both a function of driving the slider and a function of detecting the electrostatic capacitances.

9. (Amended) The electrostatic actuator according to Claim 6, wherein the first and second electrode portions are provided on a stator.

10. (Amended) The electrostatic actuator according to Claim 6, wherein the slider comprises a lens producing an image of an object, the lens being disposed on the slider, orthogonal to the predetermined direction.

Please add new Claims 22-29 as follows:

22. (New) The electrostatic actuator according to Claim 4, wherein the first and second electrode portions are provided on a stator.

23. (New) The electrostatic actuator according to Claim 4, wherein the slider comprises a lens producing an image of an object, the lens being disposed on the slider, orthogonal to the predetermined direction.

24. (New) A camera module comprising:

photographing elements;

an electrostatic actuator connected to the photographing elements, the electrostatic actuator comprising,

first and second electrode portions arranged at predetermined intervals, each portion including one or more series of electrodes arranged successively in a predetermined direction,

a slider disposed between the first and second electrode portions having electrode portions at side faces opposed to the first and second electrode portions and movable in the predetermined direction,

an electrostatic capacitance detecting circuit configured to detect electrostatic capacitances between the one or more series of electrodes of one of the first and second electrode portions and the electrode portions of the slider, and

a driving circuit configured to drive the slider in the predetermined direction by applying voltages between selected series of electrodes of one of the first and the second electrode portions and the electrode portions of the slider, said selected series of electrodes being selected based on a detected result of the electrostatic capacitance detecting circuit; and

a controller configured to control the driving circuit of the electrostatic actuator,

wherein the first and second electrode portions comprise:

driving electrodes configured to drive the slider, and

electrostatic capacitance detecting electrodes configured to detect the electrostatic capacitances, and

wherein the driving electrodes are shifted by a half of an alignment pitch along the predetermined direction from the electrostatic capacitance detecting electrodes.

25. (New) A camera module comprising:

photographing elements;

an electrostatic actuator connected to the photographing elements, said electrostatic actuator comprising,

first and second electrode portions arranged at predetermined intervals, the first electrode portion including three or more series of electrodes arranged successively in the predetermined direction and said second electrode portion including a single series of electrodes extended in a predetermined direction,

a slider disposed between the first and second electrode portions and having electrode portions at side faces opposed to the first electrode portion and movable in the predetermined direction,

an electrostatic capacitance detecting circuit configured to detect electrostatic capacitances between the three or more series of electrodes of the first electrode portion and the electrode portions of the slider, and

a driving circuit configured to drive the slider in the predetermined direction by applying voltages between selected series of electrodes of one of the first and second electrode portions and the electrode portions of the slider, said selected series of electrodes being selected based on a detected result of the electrostatic capacitance detecting circuit; and

a controller configured to control the driving circuit of the electrostatic actuator,

wherein the first and second electrode portions comprise:

driving electrodes configured to drive the slider, and

electrostatic capacitance detecting electrodes configured to detect the electrostatic capacitances, and

wherein the driving electrodes are shifted by a half of an alignment pitch along the predetermined direction from the electrostatic capacitance detecting electrodes.

26. (New) A camera module comprising:

photographing elements;

an electrostatic actuator connected to the photographing elements, said electrostatic actuator comprising,

first and second electrode portions arranged at predetermined intervals, each electrode portion including a plurality of series of electrodes arranged successively in a predetermined direction,

a slider disposed between the first and second electrode portions and having electrode portions at side faces opposed to the first and second electrode portions and movable in the predetermined direction,

an electrostatic capacitance detecting circuit configured to detect an electrostatic capacitance between the one series of electrodes of either the first electrode portion or the second electrode portion and the electrode portions of the slider, and

a driving circuit configured to drive the slider in the predetermined direction by applying voltages between selected series of electrodes of the first and second electrode portions and the electrode portions of the slider, said selected series of electrodes being selected based on a detected result of the electrostatic capacitance detecting circuit; and

a controller configured to control the driving circuit of the electrostatic actuator,

wherein the first and second electrode portions comprise:

driving electrodes configured to drive the slider, and

electrostatic capacitance detecting electrodes configured to detect the electrostatic capacitances, and

wherein the driving electrodes are shifted by a half of an alignment pitch along the predetermined direction from the electrostatic capacitance detecting electrodes.

27. (New) A camera module comprising:

photographing elements;

an electrostatic actuator connected to the photographing elements, the electrostatic actuator comprising,

first and second electrode portions arranged at predetermined intervals, each electrode portion including one or more series of electrodes arranged successively in a predetermined direction,

a slider disposed between the first and second electrode portions and having electrode portions at side faces opposed to the first and second electrode portions and movable in the predetermined direction,

an electrostatic capacitance detecting circuit configured to detect electrostatic capacitances between each one or more series of electrodes of one of the first electrode portion or the second electrode portion and the electrode portions of the slider, and

a driving circuit configured to drive the slider in the predetermined direction by applying voltages between selected series of electrodes of one of the first and second electrode portions and the electrode portions of the slider, said selected series of electrodes being selected based on a detected result of the electrostatic capacitance detecting circuit; and

a controller configured to control the driving circuit of the electrostatic actuator,

wherein the electrode portions of the slider are provided along the predetermined direction and comprises:

driving electrode portions configured to drive the slider, and

electrostatic capacitance detecting electrode portions configured to drive the electrostatic capacitances, and

wherein the driving electrode portions are shifted by a half of an alignment pitch along the predetermined direction from the electrostatic capacitance detecting electrode portions.

28. (New) A camera module comprising:

photographing elements;

an electrostatic actuator connected to the photographing elements, said electrostatic actuator comprising,

first and second electrode portions arranged at predetermined intervals, the first electrode portion including three or more series of electrodes arranged successively in the predetermined direction and said second electrode portion including a single series of electrodes extended in a predetermined direction,

a slider disposed between the first and second electrode portions and having electrode portions at side faces opposed to the first electrode portion and movable in the predetermined direction,

an electrostatic capacitance detecting circuit configured to detect electrostatic capacitances between the three or more series of electrodes of the first electrode portion and the electrode portions of the slider, and

a driving circuit configured to drive the slider in the predetermined direction by applying voltages between selected series of electrodes of one of the first and second

electrode portions and the electrode portions of the slider, said selected series of electrodes being selected based on a detected result of the electrostatic capacitance detecting circuit; and

a controller configured to control the driving circuit of the electrostatic actuator,

wherein the electrode portions of the slider are provided along the predetermined direction and comprises:

driving electrode portions configured to drive the slider, and

electrostatic capacitance detecting electrode portions configured to drive the electrostatic capacitances, and

wherein the driving electrode portions are shifted by a half of an alignment pitch along the predetermined direction from the electrostatic capacitance detecting electrode portions.

29. (New) A camera module comprising:

photographing elements;

an electrostatic actuator connected to the photographing elements, said electrostatic actuator comprising,

first and second electrode portions arranged at predetermined intervals, each electrode portion including a plurality of series of electrodes arranged successively in a predetermined direction,

a slider disposed between the first and second electrode portions and having electrode portions at side faces opposed to the first and second electrode portions and movable in the predetermined direction,

an electrostatic capacitance detecting circuit configured to detect an electrostatic capacitance between the one series of electrodes of either the first electrode portion or the second electrode portion and the electrode portions of the slider, and

a driving circuit configured to drive the slider in the predetermined direction by applying voltages between selected series of electrodes of the first and second electrode portions and the electrode portions of the slider, said selected series of electrodes being selected based on a detected result of the electrostatic capacitance detecting circuit; and

a controller configured to control the driving circuit of the electrostatic actuator,

wherein the electrode portions of the slider are provided along the predetermined direction and comprises:

driving electrode portions configured to drive the slider, and

electrostatic capacitance detecting electrode portions configured to drive the electrostatic capacitances, and

wherein the driving electrode portions are shifted by a half of an alignment pitch along the predetermined direction from the electrostatic capacitance detecting electrode portions.

REMARKS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 4, 6, 7, 8, 9, 10, and 22-29 are pending in the present application. Claims 1-3, 5, and 11-21 have been canceled, Claims 4, 6, 8, 9, and 10 have been amended, and Claims 22-29 have been added by the present amendment.

In the outstanding Office Action, Claims 1-3, 5, 9, 10, 11, 13, 14, 15, and 17-21 were rejected under 35 U.S.C. § 103(a) as unpatentable over Koga et al (JP 10-239578) and Noboru (JP 5-260766); Claims 1, 8, and 11-21 were rejected under 35 U.S.C. § 103(a) as